



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,059	12/27/2000	James M. Proper	D/A0433Q	5636

7590 10/08/2004  
John E. Beck  
Xerox Corporation  
Xerox Square 20A  
Rochester, NY 14644

EXAMINER

COOLEY, CHARLES E

ART UNIT PAPER NUMBER

1723

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/749,059

Applicant(s)

PROPER, JAMES M.

Examiner

Charles E. Cooley

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-11, 20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 6-10, 20, 22 and 24 is/are allowed.
- 6) ☒ Claim(s) 4, 5, 11, 23 and 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## FINAL OFFICE ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - a. Page 1: the attorney docket numbers and "not yet assigned" designations should be replaced with the proper serial numbers and current status for the two referenced applications.

Appropriate correction is required.

### ***Claim Rejections - 35 U.S.C. § 112, second paragraph***

2. Claim 4 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4, in view of the change in dependency via the last response, repeats subject matter found in section (b) of claim 6.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1723

4. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by FICKELSCHEER (US 619,018).

The patent to FICKELSCHEER discloses a blending tool for use in a vessel a including a rotatable drive shaft b driven by a belt pulley d or by "any other suitable means" (col. 1, lines 28-30); a shank f attached to the drive shaft b at a location of attachment e1; a collision surface g having a profile as seen in Figs. 1-4; a connector mechanism (comprised of the element g' and the socket that is disposed about the shank f in which g' is disposed as seen in the Figures); the connector mechanism capable of pivotally connecting a collision surface g to each end region of the shank f (Figs. 1-2) at a location spaced apart from the attachment location; wherein the connector mechanism is capable of permitting adjustability of the collision surface g to thereby vary the profile of the collision surface g along a plane parallel to the axis of the shaft; the connector mechanism having a fastener g' which upon fastening or tightening enables the collision surface to be rigidly fixed in one of any number of desired positions during rotation (col. 1, lines 33-35) or loosened to a degree that the collision surface g is inherently removable from the shank; the collision surface g comprising plates g spaced apart from the shank f; whereby the height of the blending tool is adjustable relative to the plane of rotation (e.g., once the fastener g' is loosened, any point on the collision surface g would be located at a higher or lower position in a plane parallel to the axis of the shaft); wherein such pivoting of the collision surface g with respect to the shank f varies the profile thereof along its height dimension; a drive means (col. 1, lines 28-30) for driving rotation of the blending tool. The surfaces g are disclosed as functioning to

throw the material being processed in multiple directions to achieve an intimate mixture and can thus be deemed "collision surfaces" as the surfaces collide with the material to thereby throw the material (col. 1, lines 8-15 and lines 40-45; col. 2, lines 1-59). The collision surfaces g are spaced apart from the shank f by the thickness of the annular socket as seen in the cross section of Fig. 1.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11, 25, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DEAM (US 354,104) in view of Applicant's admitted prior art at page 2, lines 11-24 of the instant specification.

The patent to DEAM discloses a blending tool for use in a vessel A including a rotatable drive shaft B positioned within the vessel A; the drive shaft B being driven by "any suitable motor" (col. 1, lines 34-37); a shank H attached to the drive shaft at a location of attachment; a collision surface I having a profile; a connector mechanism h, i capable of pivotally connecting the collision surface I to an end region of the shank H (Fig. 1) at a location spaced apart from the attachment location; wherein the connector mechanism is capable of permitting adjustability of the collision surface I to thereby vary the profile of the collision surface I along a plane parallel to the axis of the shaft; the

Art Unit: 1723

connector mechanism having a fastener h which upon fastening or tightening enables the collision surface to be rigidly fixed in one of any number of desired positions during rotation (col. Page 1, lines 44-56) or loosened to a degree that the collision surface I is inherently removable from the shank; the collision surface I comprising plates I ; whereby the height of the blending tool is adjustable relative to the plane of rotation (e.g., once the fastener h is loosened, any point on the collision surface I would be located at a higher or lower position in a plane parallel to the axis of the shaft); wherein such pivoting of the collision surface I with respect to the shank H varies the profile thereof along its height dimension; a motor (Page 1, lines 34-37) for driving rotation of the blending tool. DEAM does not disclose the recited speeds of rotation or specific power. Applicant's admitted prior art at page 2, lines 11-24 of the instant specification suggests that it is well known in the blending art to rotate a blending tool in a vessel via a drive mechanism at speeds that exceed 50 ft/sec at the outside edge thereof and speeds in excess of 90 ft/sec or 100 ft/sec are common. In view of the disclosure in DEAM that the drive shaft B can be driven by "any suitable motor", it would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have rotated the blending tool of DEAM at the recited speeds as suggested by the admitted prior art at page 2, lines 11-24 of the instant specification for the purpose of increasing the blending intensity proportional to the speed of rotation (page 2, lines 21-24 of the instant specification). Pursuant to Rule 1.75(c), it appears a drive mechanism meeting the subject matter of part (d) of claim 11 would necessarily produce the specific power recited in claim 25 or claim 25 would not be a proper dependent

Art Unit: 1723

claim. Accordingly, since the admitted prior art teaches such a drive mechanism and in light of the high rotational speeds taught by the admitted prior art, the recited specific power of claim 25 would necessarily flow from the prior art and thus inherently be achieved by such speeds.

7. Claims 11, 23, 25, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over FICKELSCHEER (US 619,018) in view of Applicant's admitted prior art at page 2, lines 11-24 of the instant specification

The patent to FICKELSCHEER discloses a blending tool for use in a vessel a including a rotatable drive shaft b driven by a belt pulley d or by "any other suitable means" (col. 1, lines 28-30); a shank f attached to the drive shaft b at a location of attachment e1; a collision surface g having a profile as seen in Figs. 1-4; a connector mechanism (comprised of the element g' and the socket that is disposed about the shank f in which g' is disposed as seen in the Figures); the connector mechanism capable of pivotally connecting a collision surface g to each end region of the shank f (Figs. 1-2) at a location spaced apart from the attachment location; wherein the connector mechanism is capable of permitting adjustability of the collision surface g to thereby vary the profile of the collision surface g along a plane parallel to the axis of the shaft; the connector mechanism having a fastener g' which upon fastening or tightening enables the collision surface to be rigidly fixed to the shank f in one of any number of desired positions during rotation (col. 1, lines 33-35) or loosened to a degree that the collision surface g is inherently removable from the shank; the collision surface g

Art Unit: 1723

comprising plates g spaced apart from the shank f; whereby the height of the blending tool is adjustable relative to the plane of rotation (e.g., once the fastener g' is loosened, any point on the collision surface g would be located at a higher or lower position in a plane parallel to the axis of the shaft); wherein such pivoting of the collision surface g with respect to the shank f varies the profile thereof along its height dimension; a drive means (col. 1, lines 28-30) for driving rotation of the blending tool. The surfaces g are disclosed as functioning to throw the material being processed in multiple directions to achieve an intimate mixture and can thus be deemed "collision surfaces" as the surfaces collide with the material to thereby throw the material (col. 1, lines 8-15 and lines 40-45; col. 2, lines 1-59). The collision surfaces g are spaced apart from the shank f by the thickness of the annular socket as seen in the cross section of Fig. 1.

FICKELSCHEER does not disclose the recited speeds of rotation or specific power.

Applicant's admitted prior art at page 2, lines 11-24 of the instant specification suggests that it is well known in the blending art to rotate a blending tool in a vessel via a drive mechanism at speeds that exceed 50 ft/sec at the outside edge thereof and speeds in excess of 90 ft/sec or 100 ft/sec are common. In view of the disclosure in

FICKELSCHEER that the drive shaft b can be driven by a belt pulley d or by "any other suitable means", it would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have rotated the blending tool of

FICKELSCHEER at the recited speeds as suggested by the admitted prior art at page 2, lines 11-24 of the instant specification for the purpose of increasing the blending intensity proportional to the speed of rotation (page 2, lines 21-24 of the instant

Art Unit: 1723

specification). Pursuant to Rule 1.75(c), it appears a drive mechanism meeting the subject matter of part (d) of claim 11 would necessarily produce the specific power recited in claim 25 or claim 25 would not be a proper dependent claim. Accordingly, since the admitted prior art teaches such a drive mechanism and in light of the high rotational speeds taught by the admitted prior art, the recited specific power of claim 25 would necessarily flow from the prior art and thus inherently be achieved by such speeds.

8. Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over DEAM (US 354,104) in view of GB 1024053.

The patent to DEAM discloses the recited subject matter as noted above but does not disclose the recited speeds of rotation or specific power. GB 1024053 discloses a blending tool 11 mounted to a drive shaft 10 and a vessel 1, 2. The device is used for processing particulate solids or finely divided solids such as pigment particles (page 1, lines 17-20). The blending tool 11 is rotated at speeds of 2000 ft/min to 4000 ft./min (or 33.33 ft/sec to 66.67 ft/sec) at the outside edge of the tools (page 3, lines 93-98) by a drive mechanism (page 1, lines 61-68). In view of the disclosure in DEAM that the drive shaft B can be driven by "any suitable motor", it would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have rotated the blending tool of DEAM at the recited speeds as suggested by GB 1024053 for the purposes of increasing efficiency, reducing retention time, increasing the amount of material that is processed per unit time, and increasing throughput (Page 3, lines 34-50). Pursuant to Rule 1.75(c), it appears a drive

Art Unit: 1723

mechanism meeting the subject matter of part (d) of claim 11 would necessarily produce the specific power recited in claim 25 or claim 25 would not be a proper dependent claim. Accordingly, since the admitted prior art teaches such a drive mechanism and in light of the high rotational speeds taught by GB 1024053, the recited specific power of claim 25 would necessarily flow from the prior art and thus inherently be achieved by such speeds.

9. Claims 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over FICKELSCHEER (US 619,018) in view of GB 1024053.

The patent to FICKELSCHEER discloses the recited subject matter as noted above but does not disclose the recited speeds of rotation or specific power. GB 1024053 discloses a blending tool 11 mounted to a drive shaft 10 and a vessel 1, 2. The device is used for processing particulate solids or finely divided solids such as pigment particles (page 1, lines 17-20). The blending tool 11 is rotated at speeds of 2000 ft/min to 4000 ft./min (or 33.33 ft/sec to 66.67 ft/sec) at the outside edge of the tools (page 3, lines 93-98) by a drive mechanism (page 1, lines 61-68). In view of the disclosure in FICKELSCHEER that the drive shaft b can be driven by a belt pulley d or by "any other suitable means", it would have been obvious to one having ordinary skill in the art, at the time applicant's invention was made, to have rotated the blending tool of FICKELSCHEER at the recited speeds as suggested by GB 1024053 for the purposes of increasing efficiency, reducing retention time, increasing the amount of material that is processed per unit time, and increasing throughput (Page 3, lines 34-50). Pursuant to Rule 1.75(c), it appears a drive mechanism meeting the subject matter of part (d) of

Art Unit: 1723

claim 11 would necessarily produce the specific power recited in claim 25 or claim 25 would not be a proper dependent claim. Accordingly, since the admitted prior art teaches such a drive mechanism and in light of the high rotational speeds taught by GB 1024053, the recited specific power of claim 25 would necessarily flow from the prior art and thus inherently be achieved by such speeds.

***Allowable Subject Matter***

10. Claims 3, 6, 7, 8, 9, 10, 20, 22, and 24 are allowable over the prior art of record.

***Response to Amendment***

11. Applicant's arguments with respect to the pending claims have been considered but are deemed to be moot in view of the new grounds of rejection necessitated by amendment.

12. Applicant's arguments filed 4 AUG 2004 have been fully considered but they are not deemed to be persuasive.

In view of the disclosure in DEAM that the drive shaft B can be driven by "any suitable motor" and in view of the disclosure in FICKELSCHEER that the drive shaft b can be driven by a belt pulley d or by "any other suitable means", the blending tools of DEAM and FICKELSCHEER are deemed capable of rotating at the recited speeds in view of the suggestions and teachings of the admitted prior and GB 1024053.

The remarks regarding claim 5 were explicitly addressed in the rejection above. Lacking any defining structure to the contrary, the elements g in FICKELSCHEER can

Art Unit: 1723

be considered collision surfaces or plates within the broad expanse of the term. Note it is incumbent upon the examiner that the terminology in a pending application's claims be given its broadest reasonable interpretation (*In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)) and limitations from a pending application's specification will not be read into the claims (*Sjolund v. Musland*, 847 F.2d 1573, 1581-82, 6 USPQ2d 2020, 2027 (Fed. Cir. 1988)).

### **Conclusion**

13. Applicant's amendment necessitated the new grounds of rejection. Accordingly, THIS ACTION IS MADE FINAL. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION. ANY RESPONSE FILED AFTER THE MAILING DATE OF

Art Unit: 1723

THIS FINAL REJECTION WILL BE SUBJECT TO THE PROVISIONS OF MPEP 714.12 AND 714.13.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, appearing to read "Charles", followed by a stylized flourish.

Charles E. Cooley  
Primary Examiner  
Art Unit 1723

6 OCT 2004